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Peer Group Programme for Children and Adolescents with HIV in Nairobi: Common Therapeutic Elements Approach

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Abstract

Our paper begins by reviewing the mental health burden of adolescents living with HIV in Africa and Kenya. Secondly, we discuss HIV related mental health problems common in Kenya and prevalence of HIV related morbidity and mortality in this vulnerable group. We then map out the nature of HIV services in hospital settings and underscore the paucity of culturally rooted, relevant evidence based psychosocial interventions that encourage health seeking behaviors. With this background, we draw out our team's emphasis on utilizing a common elements therapeutic approach in drawing out a peer group psychosocial intervention offered at the Comprehensive Care Centre of Kenyatta National Hospital. We share our conceptual framework developed iteratively by multiple partnership discussions and then delineate specific 'common elements' from different approaches and treatments for HIV positive adolescents. We share a novel health systems implementation approach of developing interventions that are curative and preventative through multidisciplinary partnership models. **Relevance to innovation.** We share an innovative common elements therapeutic approach that is evidence based and a popular option in mental health care in developed countries. We intend to adapt the novel model in the Kenyan context, to achieve positive outcomes in clinical and mental health indicators. Its advantage is that it is usable by health care workers and peer supporters with diverse levels of training and experience in mental health. It can also be contextualized to suit health care in low and middle income contexts without losing its impact potential. When trained in its use, health care workers can be able to scale it to diverse populations in other health care settings in Kenya and beyond.

Keywords. Children and adolescents with HIV, common elements therapeutic approach, mental health intervention, self growth, stigma prevention.

Introduction- prevalence of HIV related morbidity and mortality in children and adolescents

The Human Immunodeficiency Virus (HIV) and Acquired Immunodeficiency Syndrome (AIDS) have a severe impact on the lives of children and adolescents throughout the world. SubSaharan Africa (SSA) has the world's highest prevalence of HIV incidence. UNAIDS (2011) estimated that 55 million young people aged 15-24 years were living with HIV/AIDS around the world and out of these, 3.8 million were in SSA. Kenya is among six countries in the world with the highest number of adolescents infected with HIV/AIDS. According to NACC (2015), 435,225 adolescents aged between 10 and 19 years in Kenya are HIV positive, with Nairobi County is leading with 49,904 adolescents living with HIV, while another 119,899 have the virus 'but are not yet identified'. New infections are highest among older adolescent and young adults. The annual new infections among children aged 0-14 years, is 12,511 and 13,148 for those aged 14-25 years. For 20% of youth aged 15-24 years, new infections are attributed to early sexual debuts before their 15th birthday. Data from the 2012 Kenya AIDS Indicator Survey shows a dramatic difference in HIV prevalence for adolescents aged 15-19 years at 2.0% and 5.9% for those aged 20-24 years (NASCOP, 2014). This difference suggests that many young people are infected during adolescence. Female youth are significantly more likely to be infected than their male peers. For instance, among 15-19 years olds, 31.1% were females and 0.9% were males, while among 20-24 year olds, 4.6 % were females and 1.3% were males.

At present, Kenya has made marked progress in the prevention and management of HIV infection since the first diagnosis was made 3 decades ago. The increased access to antiretroviral treatment has resulted in increased survival rates among the children and adolescents infected with HIV/AIDS. However, HIV still remains a challenge in the general population with over 100,000 new infections annually (NASCOP, 2016). Adolescents and young people still bear the brunt of HIV epidemic due to limited access to information, services, stigma and discrimination (NACC, 2015). While Care and treatment programs for people living with HIV can be found in every country, there is a gap in provision of ongoing HIV/AIDS treatment, care and support programs that are specialized in addressing the needs of adolescents.

Mental Health in child and adolescent HIV

Mental health challenges that exacerbate the HIV disease

The HIV/AIDS pandemic has severely impacted the mental health of children and youth. A few studies suggest that HIV infected children and youth may be at a greater risk for psychiatric problems or poor mental health problems compared with their uninfected peers (Bhana, et al. 2014, Mellins et al., 2009). Mental health functioning is among the most significant predictors of health and behavioral outcomes. Thus mental health problems may be a predisposing factor for HIV infection or a perpetuating factor for risky behavior in HIV infected youth. According to Vranda and Mothi (2013) children with chronic illness are at risk of psychiatric problems including depression, anxiety and feeling of isolation. This is due to complexity of their illness and treatment as well as

the adverse psychological circumstances and life in distressed areas affected by poverty, violence, family conflict, substance use and limited access to care.

A study done by Kamau et al. (2012) in Kenya, found the prevalence of psychiatric disorders to be 48.8% among children and adolescents attending the Comprehensive Care Centre (CCC) of Kenyatta National Hospital (KNH), aged between 6-18 years from low-resources settings. The most common disorders found were major depression, social phobia, oppositional defiant disorder, attention deficit hyperactivity disorder, specific phobia, bipolar disorder, panic disorder, conduct disorder, agoraphobia, separation anxiety disorder, dysthymia, psychotic disorder, post traumatic stress disorder, and pervasive developmental disorder. A quarter of the participants were found to have more than one psychiatric disorder. A Ugandan study focusing on adolescents who were HIV positive found high rates of anxiety, depression, somatization and mania (Musisi & Kinyanda, 2009).

Kim and colleagues (2015) examined factors that were associated with depression among HIV infected adolescents in Malawi. They looked at different factors such as socio-demographics, post traumatic stressors, behavioral factors, social support and bio-clinical parameters. The examined a sample of 562 HIV positive adolescents with a mean age reported as 14.5 years and 56.1% were female. They found that the prevalence of depression was 18.9%. Factors that were strongly associated with depression include, female gender, fewer years of schooling, death in the family / household, failing a school term / class, having a boyfriend or girlfriend, not disclosed to or not sharing one's HIV status with another person, severe immune-suppression and bullying in school for taking medication. Findings from this study emphasize the need to have interventions that support mental health of HIV infected adolescents and stigma reduction to improve treatment outcomes.

Other studies have also shown that HIV positive children had higher rates of mental health problems than those who were not affected. One study from South Africa by Louw et al (2016) examined the emotional and behavioral problems in children with perinatally acquired HIV infection. The study aimed at providing a quantitative description of emotional and behavioural difficulties among 78 HIV infected youth and compared with a demographically matched 30 non HIV infected youths as a control. The study revealed significant depression rates in caregivers whose children were HIV infected. Kapetanovic et al (2012) similarly looked at the mental health burden of both pediatric HIV positive and pediatric HIV exposed uninfected adolescents and established that the factors associated with increased mental health problems among the adolescents include caregiver's characteristics such as psychiatric disorder and health related functional limitations.

Mental health problems have been found to have a negative impact on HIV positive adolescents. Issues of poor adherence to treatment, increased risk behaviors were results of increased mental health problems such as depression, emotional and behavioral difficulties (Dow, et al. 2016; Kim, et al.2015). Adolescents who are depressed, tend not to take their medication when they are depressed leading to high viral load (Chandawani et al, 2012). Williams et al. (2010) found that HIV positive and HIV negative adolescents aged 12-18 years in western Kenya were at a significantly increased risk of substance use and having psychiatric symptoms. The odds of substance use were significantly increased when the

adolescents were found to have disruptive disorders and mood disorders. HIV positive adolescents who do not adhere to treatment, were found to have high viral load with significant association between non-adherence and substance use, as well as, internalizing behavior problems (Chandwani et al., 2012).

Evidence based Interventions to address challenges of children and adolescents living with HIV

There exists evidenced based interventions that are used to tackle challenges faced by adolescents living with HIV/AIDS. According Bhana et al., (2014) there are few evidence based mental health and health promotion programs to support families in promoting the health and psychosocial well-being of children and adolescents living with HIV. Despite availability of antiretroviral treatment (ART), adolescents still experience a set of complex issues related to identification, care and treatment (Bhana et al., 2016). Adolescents are an ever growing part of HIV pandemic. There is a gap in psycho-social support, life skills education and peer support group interventions for the fast-growing HIV-positive adolescent population in Sub-Saharan Africa generally and Kenya specifically. Therefore, there is need for services for HIV positive adolescents that are age appropriate because adolescents have specific needs that cannot be met through child or adult clinics. Without creating a separate space for youth-friendly services, this already vulnerable population can get lost in current cascade of care into which they do not fit. Creating developmentally appropriate services for HIV positive adolescents will help open vital communication between them and healthcare personnel, which may help them stay engaged in care and thus facilitate health promoting behaviors. Contrastingly, age- appropriate transitional services for adolescents have been associated with improved follow up, better disease outcomes, and improved psychological health.

Teen Club International

The Bipai International Pediatric AIDS Initiative (BIPAI) was founded by American Physician Dr Mark Kline in 1999 to improve health and lives of children infected with HIV, through specialized high quality, high impact, highly ethical pediatric and family HIV/AIDS care and treatment programs (www.bipai.org/Teen Club International). The structure is activity based and incorporates activities such as socio-recreation (games, drama, safaris, movies, music), psychoeducation (on topics such as HIV education, life skills, college and high school preparation, financial literacy), psychotherapy (to normalize teens social experiences and improve their outlook in life). The program is held monthly and facilitated by a multidisciplinary team of pediatricians, nurses, nutritionists, social workers, adolescent support officers, psychologists, and administrative staff. The target population is adolescents aged 10-19 years, In partnership with local governments, BIPAI has built and operates clinical centers of excellence and programs in different countries worldwide such as Botswana, Uganda, Lesotho, Swaziland, Malawi and Romania. As the Teen Club International programs provide a safe, welcoming and nurturing environment, positive outcomes result such as: increased attendance to the programs, positive relationships, increased self-esteem, reinforced positive habits

that ensure a healthy transition into adulthood. As recognized by the 2010 UNAIDS report 'Children and AIDS', Teen Clubs have become a global model of excellence for the provision of care and support to HIV-positive adolescents. They have shown to be an extremely effective group intervention.

Leading the Way Support Group in Canada

The 'Leading the Way' support group program delivered by the Teresa Group in Canada, provides practical assistance and emotional support to children, youth and families living with and affected by HIV/AIDS (Shindler and Tangelder, 2010). According to Shindler et al. (2010), the program is a 9-week psychosocial support intervention offered twice a year by trained social workers. The program structure is activity based, and constitutes 4 distinct and complementary methodologies that guide its activities. These include: Socio-recreation, which encourages free and creative expression of feelings, thoughts and experiences through games, drama, music, and dancing; Psychotherapy, which is used to explore difficult issues and feelings associated with issues such as stigma, disclosure, mental health problems, loss, peer relations, and low selfesteem; Peer Modeling, which enables group members to learn from one another and which elicit social support; Psychoeducation, which addresses information gaps around treatment and prosocial, positive models of how life can be led meaningfully. Findings from a study conducted in 2007 to identify the outcomes of the Leading the Way program indicated that disclosed children (aware of the presence of HIV in themselves and in their family) experienced less depression and anxiety compared to their non-disclosed counterparts. In addition, the intervention positively influenced the children's sense of self and their ability to cope and problem solve.

UKA and CHAMP Support Groups in South Africa

There are two evidence based programs in South Africa namely, the VUKA (which means 'Let's wake up' in isiZulu) program and the Collaborative HIV and Adolescents Mental Health Program (CHAMP). The VUKA program is a cartoon based family intervention aimed at reducing risk behaviors among youth living with HIV/AIDS. It is a 10 session intervention of approximately 3 months duration delivered to adolescents aged 9-14 years and their families. It focuses on negative peer influence, poor financial, family and social support, specific psychosocial problems and challenges such as loss of a parent, difficulty accepting and dealing with identity and status issues related to HIV, stigma and discrimination, disclosure, difficulties in understanding ART and adherence to medication specific to young people living with HIV and their caregivers. The program is ran by a multidisciplinary team of physicians, nurses, psychologists, lay counsellors and researchers, together with patients, artists and educators. According to Bhana et al., (2016) the VUKA pilot trial was carried between 2008, 2010 and 2012. The objective of the study was to examine the contextual, social and self-regulation factors that are associated with positive mental health outcomes among youth living with HIV/AIDS. Youth who were involved in the study showed improvement in all dimensions such as

mental health, youth behavior, HIV treatment knowledge, stigma, communication and adherence to medication.

The CHAMP is developmentally-timed, multi-session, family-based intervention that has been adapted and implemented with HIV youth in South Africa and in the US (Bhana et al., 2014, pg. 3). It was developed to improve parent-child relationship and strengthening the adult protective shield as a protective factor against HIV infection in adolescents. The study showed that there was significant improvement in communication, supervision, monitoring and support and youth mental health and risk behaviors (less time was spent in risky behaviors).

Mema Kwa Vijana Support Group in Tanzania

The MEMA kwa Vijana (which means 'good things for young people') intervention in Tanzania, focuses on the prevalence of HIV, other STIs and pregnancy and on sexual health knowledge, attitudes and reported sexual behaviors. A trial by Doyle et al (2010) conducted between 1998 and 2008 in ten different communities in rural Tanzania, focused on behavior change interventions to reduce HIV infection in young people. The interventions consisted of teacher led, peer assisted programs in school education, youth friendly services, community activities and youth condom promotion and distribution. The results of the trial showed that MEMA Kwa Vijana interventions improved young people's sexual and reproductive health knowledge. Additionally, there was no significant negative impact in the HIV and STIs status either after 3 years or after more than 8 years of the intervention being in place.

Mental health services at the Comprehensive Care Centre of Kenyatta National Hospital, Nairobi, Kenya

Children and adolescents who attend CCC clinics at KNH receive one stop comprehensive mental health services from a multidisciplinary pediatric team of clinicians, pediatricians, nutritionists, nurses, pharmacists, counselors, psychologists, laboratory technologists, social workers, and peer mentors. During routine clinics, the nursing team, which is the first point of contact with the patients, screens them through individual interviews, for problems regarding adherence to medication, disclosure of HIV status as well as common mental health such as depression, anxiety, traumatic stress, conduct disorders and substance abuse. Through a centralized electronic patient management system, patients are referred appropriately to specified service stations for individualized care, and real time data is recorded for ease of management. Patients with identified mental health problems are referred to the psychosocial team comprising counselors, psychologists, social workers, and peer supporters. Patients' first encounter with the psychosocial team is with the counselor, who facilitates individual counseling in areas such as adherence to medication and/or disclosure. The patient is then referred to a clinician or pediatrician for medical review.

The counselor also screens the patient further for mental health problems using online mental health screening tools. If a problem is identified and it is found to disrupt social and occupational functioning, the patient is referred for further intervention to a

psychologist who conducts a full mental health assessment and makes recommendations. Where there is need for psychiatric review, the patient is booked to see the psychiatrist at the CCC clinic. In case of a nutritional concern, the patient is referred to the nutritionist. Where specialized services such as Family Planning are required, patients are given a consultation note to the Family Planning clinic outside CCC. If psychosocial concerns resulting from home or school environment are identified, the patient is referred to a social worker who conducts a social assessment and makes recommendations. The social worker determines patients targeted for case management and discusses with the multidisciplinary team on appropriate follow up action such as home visits, frequent clinic visits for close monitoring and link to support groups. Home visits enhance holistic family care and improve treatment outcomes. On a regular basis, multidisciplinary meetings are held at the CCC to discuss management plans for patients who experience persistent clinical and mental health concerns that imply treatment failure. Through these discourses, patient follow up is intensified to ensure progress and retention in care. All health care providers follow standard operating procedures to guide their practice. For example the psychosocial team adheres to written protocols for adherence preparation for ART, adherence counseling, disclosure of HIV status to children, mental health management, transition to higher levels of care, and support group therapy.

Peer supporters are also useful in providing additional support in mental health as expert patients. The CCC clinic has two adolescent peer mentors. They may be called upon by other health care works to intervene in one-on-one counseling, where they are needed to build rapport with the patient in order to encourage open sharing. They are actively involved in organizing and leading group educational activities and networks, home visits, accompaniment of patients to clinics outside CCC to which patients are referred, attending to assigned administrative duties, and providing accompaniment to health care workers, to services such as psychosocial support for ward patients, linkage to care and treatment for newly diagnosed patients, and outreaches (for example World AIDS Day, giving presentations at other health care facilities). As they have an edge in being techno savvy, they have been active and successful in mobilizing, motivating and mentoring their peer group. Through communication avenues such as WhatsApp and facebook, the peer supporters have been able to engage and mentor their peers in discussions that seek to address peer related issues. Work is still underway to streamline these interactions so that age appropriate factual messages are conveyed through a consultative feedback strategy that is supervised by a health care worker. They are also resourceful in identifying suitable peer supporters from those who are managing their own health. This helps to beef up the mentoring team to ensure quality individualized follow ups.

In addition to individualized care offered to children and adolescents, the CCC multidisciplinary team conducts regular facility based age appropriate activity based peer support groups through an evidence based differentiated model of care on specific clinic days. These are: 10 to 14 year olds group which meets on Wednesdays, 15 to 19 year olds group which meets on Thursdays, and 20 to 24 year olds group which meets on Fridays. As these groups are still unstructured in their curriculum, the psychosocial team is in the process of streamlining the ongoing programs in order to achieve better and sustainable results that adequately address the felt needs of these age groups. As

the patients engage in support group programs, they are empowered with knowledge and life skills to facilitate a smooth transition to higher levels of care such as from children to adolescent care, and from adolescent to adult care. This approach helps them to grow to be independent and responsible over their own health, and this improves their retention in care. We also have focused interventions that address these adolescents. Specifically, we hold holiday programs which target all children and adolescents who attend CCC clinics irrespective of their treatment status. During these one day forums, the group engages in fun activities and presentations such as singing, dancing, fashion show, drama, personal stories, psycho-education sessions that addresses psychosocial issues specific to each age group, and graduation of adolescents transitioning to adult care. Apart from having the ongoing age-specific weekly peer support groups and holiday groups, the CCC psycho-social team is working towards having needs-specific support groups to address newly disclosed, newly enrolled, enhanced adherence, gender based, emancipated minors below age 18 years.

The CCC has some materials and equipment that enable us to engage this group in adolescent friendly services through, music, game, art, creative writing and public speaking. We also have a growing library whose resources (audio-visual, literary, games, music) are available for use during peer support groups. Over time we have noted improvement in children and adolescents interest and utilization of these materials. In particular, participation in group games has enhanced peer relations and bonding. Availability of reading material has encouraged reading skills in adolescents who previously preferred to spend time on their mobile phones either texting or playing games. These opportunities have continued to help them to adopt healthy habits through peer modeling. We would like to improve and diversify our creative methodologies in order to build treatment literacy and encourage peer led support activities that are relevant to a diverse population.

We are currently working towards improving an ongoing novel outfit that works alongside the peer support groups. Its goal is to motivate children and adolescents to commit themselves to take responsibility over their health and maintain viral suppression. The program, known as Operation Triple Zero (OTZ), is a facility based initiative that is driven by peer led support networks. It uses an asset based approach to offer comprehensive HIV treatment literacy through adolescent responsive empowerment strategies. Recruitment of those willing to join OTZ is ongoing during the peer support groups. We have committed adolescent and young people champions/mentors who lead the OTZ campaign not only within the hospital but also in other health facilities. We are yet to streamline the OTZ framework that would incorporate standard packages and supervision for the members.

Existing gaps in the care and management offered at CCC are many. They include: service, engagement, system, implementation, and community gaps. In the service gap, non medical health workers are not adequately empowered or trained for mental health outreach among children and adolescents. In the engagement gap, healthcare workers are poorly engaged with children and adolescents. In the system gap, there are few and unmatched categories of qualified health care workers, bookings for children and adolescents are not fully aligned with the peer support group schedule, and structures that link mental health services in individual and group sessions are weak. In the

implementation gap, despite the existence of evidence based interventions globally, there is none that has provided evidence for sustainability in comprehensive mental health coverage for perinatally infected children and adolescents with psychosocial needs in Kenya. In the community gap, there are weak community structures for engagement and outreach on mental health support for children and adolescents.

The way CCC has tried to address some of these concerns is by first streamlining appointments by reminding clients as they come for routine clinics. Secondly, liaising with peer supporters already present at the facility to identify suitable peer supporters, by updating information regarding schooling of clients to know their availability. Thirdly, by developing a supervisory team of health workers involved with adolescents and young people to give oversight to improvement strategies. Fourthly, by having the CCC multidisciplinary team continue to work on developing standard packages for adolescents and young people. There is need to further establish tangible national networks and involve the peer groups, as this would enhance ownership of the intervention process. Fifthly, we have been pooling resources (audio-visual, literary, games, music) to enrich our library at the facility. We still need more age appropriate materials that could be used to serve a growing number of children and adolescents and engage them in a more relevant and sustainable way.

The CCC also sees it necessary to empower health care workers and peer supporters through links with national networks and leveraging on consistent healthy communication that drives progress towards positive results. This would necessitate more specialized in house trainings to improve on knowledge, skills and attitude as this team applies the model. Currently, healthcare workers at CCC participate in continuous medical education organized by the management through presentations on work done by health care workers at the CCC. In addition, the CCC management also gives healthcare workers opportunity to participate in professional training in HIV and adolescent health management organized by the Ministry of Health through NASCOP among other organizations outside the facility, on quality improvement methods in health management. The CCC is working to establish clear monitoring and evaluation strategy in order to facilitate the achievement of quality objectives for children and adolescent health care. It is also working to build the capacity of peer supporters, who are highly instrumental in facilitating support groups through their lived experience, yet have limited background training in managing children and adolescent health issues. This would be facilitated through mentorship programs, participation in continuous medical education and trainings, workshops as well as in benchmarking activities with other facilities to enhance experiential learning.

As the CCC is one of the clinics within a hospital with a distinguished status as a national, teaching and referral Hospital, it caters for a diverse population with regards socio-economic, cultural and educational backgrounds. This would necessitate a rich interaction between the clients and health care providers, and also a broadening of the methodology, especially enabling peer support groups to adapt to a diverse population in order to improve treatment outcomes. This would help to build evidence on the impact of services rendered to children and adolescents within the broader context. With the support of KNH and funding through the US President's Emergency Plan (PEPFAR) and the US Department of Health and Human Services Centres for Disease Control and Prevention (HHS/CDC)/University of Nairobi Centres of Excellence HIV Management

partnership framework, the CCC is assured of support for innovative interventions aimed at improving the quality of appropriate health services to children and adolescents that fit within the Kenya AIDS Strategic Framework.

Common Elements Therapeutic Approach

Various evidence based interventions tested in settings like Kenya can be put into practice by task sharing and task shifting methods. The model of peer support and peer training is also an example of such a move from investing in specialist trainings to training lay counsellors and at times peers (Bolton et al, 2014). The psychosocial team intends to utilize a common elements treatment approach (CETA) which has an eclectic flavor and combines strategies from various psychotherapies. In adapting these therapies to a group of HIV positive adolescents what is needed is no substantial changes in the mainstay/core elements of therapies but adaptations and modifications to the settings, peripheral issues (terminologies, analogies, cultural factors and contexts) (Patel et al, 2011; Verdeli et al, 2008; Murray et al, 2015), which can be achieved by borrowing an implementation framework where these common therapeutic elements are collated, and adopters and mental health systems' ability to innovate these treatments is carefully studied. WHO mhGAP has highlighted the need for evidence based interventions development for vulnerable populations like adolescents and especially those affected by HIV/AIDS. The CETA model combines anxiety, depression, stress/ trauma focused strategies in which lay counselors and peer supporters in Low and medium income contexts (LMIC) can be trained. The core principles of the therapies do not change but the way these are offered and packaged and the ability of the lay therapist or peer supporter to make relevant decisions about the intervention has room for change. While we are not adopting CETA treatment manual but treating CETA as a conceptual model to tie in domains of activities, themes and sessions that we feel our HIV positive adolescents need to learn in order to 'live healthy'.

In embracing the CETA as a conceptual model, we are tying in an understanding of anxiety, trauma, depression, and life skills such as confidence, proactive decision making, social expression and support. The evidence for community based programs or hospital based peer support services for HIV children and adolescents in LMIC setting is very limited. The uptake of evidence based methods and practices have been really limited so far. Our work was guided by the need to improve the quality of mental health services for HIV positive children and adolescents in specialist HIV programs addressing their psychological distress and building their resilience. This is a first step towards strengthening implementation gaps and building professional services in a consultative manner where evidence based psychotherapeutic strategies are tied together in their common elements. We have in principle also tried to incorporate what Chorpita et al (2008) call the move away from 'uptake of evidence based strategies' towards 'generation of positive outcomes' for this vulnerable group of HIV positive adolescents. The focus of the HIV positive adolescent friendly services and mental health programming in Kenyatta National Hospital is to recognize the need to retain the children and adolescents in the continuum of care, providing structured psychotherapy and support at health facility and community health care levels.

We have conceptualized our common therapeutic elements on four tiers as such:

1. *Social-recreational tier* is there to provide a social and recreational association with the group work. It incorporates elements of lightening up, relaxing, mingling and having enjoyable time, thus creating the strong need to 'de-medicalize' and create more positive associations with the group coming together as an social and peer support entity.
2. *Peer Modeling tier* is there to use peer support both in the forms of using the psychotherapist/counselor who is available to moderate the session and the peer leader from the group who will lend support, become a bridge between rest of the participants and the group moderator. There is also an element of fostering peer mentorship and using their feedback on problem solving, and sharing/learning from personal stories of successes or failures in their health management.
3. *Psycho-educational tier* seeks to provide greater support in terms of relevant, positive and motivational as well as HIV disease related information and support in measured doses so that the participants are not overwhelmed by the information but use it to enhance their psychosocial functioning.
4. *Psychotherapeutics tier* seeks to build into the work assessing and addressing specific needs such as motivational support, depression and anxiety, shame or stigma. It puts greater emphases on understanding and tapping into emotional and thought disturbances, but done in a way to address these problems and find strategies that children and adolescent participants could adopt.

In this modular approach, we have tried to elicit competencies that the participants and therapists would develop through the support group program, therefore making the task of 'CETA adaptation' and providing a structured therapy in the resource constrained environment with high risk patient, more manageable. This work is closely aligned by the suggestions of Borntrager et al (2009) and Kazdin's (2008) of building evidence based practices in HIV care that have broader set of treatment approaches that incorporate research, clinical judgment, and client-specific needs. Keeping this consideration in mind, the current work is informed by multiple stakeholders from KNH such as therapists on ground offering mental health services at the CCC, the Head, VCT and HIV prevention Unit, and Youth mental health services, the mental health research and capacity building coordinator, a University of Nairobi maternal and child mental health researcher, and clinical psychologists with interests in adolescent HIV related mental health burden who are on the team that is spearheading the process of adapting the CETA at the CCC.

In the readiness to systematize the ongoing children and adolescent support groups at CCC through the current development of the 'Positive and Healthy Living' manual, and to create greater fidelity and therapist willingness to adopt evidence based practices to improve the quality of peer groups, the formation of an extensive team that is teachable is very crucial. It is in collaborative partnerships with health care workers at the CCC, in specialist clinics and research settings that the work of communicating relevant clinical and engagement strategies, identification of key problem areas and adolescent friendly attitudes, and uptake would take place.

With a cohesive, multi-skilled team the following tasks in care delivery are possible:

1. *Training in a modular approach*, generating culturally relevant and adolescent friendly activities for group work.
2. *Changing the attitudes of health care providers* and mental health workers.
3. *With appropriate compatibility, adopting innovations.*

The broad objective of this work is to distil common elements from evidence based treatments and to shape evidence based practice with a view to maintain HIV Positive children and adolescents in the care cascade and enhance their capabilities. Using the distilling and matching model (DMM) proposed by Chorpita et al (2005), we aim to:

1. *Identify techniques that are most useful* (such as: Should an exercise be cognitively targeted or more behavioral? Should it be individual work or group work?) and bolster it with evidence from patient self-report and therapist experiences (such as: How did you find this experience? Was it difficult to run this activity in the group?).
2. *Match the techniques by gauging the associations between the treatment content and study characteristics* (such as: How does self-esteem or social support become relevant and operationalized in the context of HIV positive children and adolescents experiencing a lot of family adversities) and refine our model or conceptual thinking of the four tiers described above (through constant comparison and discussion among the study team and feed-backing it to the adolescent participants).
3. *Identify which study characteristics matter the most* (such as: the setting factors, children and adolescent key characteristics, and social support available). This would help to have key target outcomes match our final intervention effectiveness.

Clinical case scenarios among children and adolescents that are common in mental health practice at the Comprehensive Care Centre of Kenyatta National Hospital

Below are clinical vignettes from two of the authors, one of who carried out her research at the CCC, and the other who engages in psychotherapy at the CCC. They both share their experiences and offer observations of what they have encountered with children and adolescents living with HIV. These vignettes highlight in part the characteristics of this population and underscore the need for the adaptation of the CETA model in improving mental health interventions at the CCC. In this way, they validate the conceptual foundations of our work.

Case scenario from Otsetswe Musindo

"I consider myself to be very fortunate to have done my research at Kenyatta National Hospital's Comprehensive Care Centre. The experiences I have had have helped me to broaden my knowledge of working within a HIV care clinic. I had the opportunity to integrate and apply what I have learnt to real life situations. The objective of my research was to assess the neurocognitive function of HIV positive children using a neurocognitive battery tool called KABC-2 and explore their psychosocial factors using the HEADS_ED screening tool. During my research, I interacted with children living with perinatally

acquired HIV of ages 8-15. Among this group, some understood why they were attending the clinic; others were clueless while for some others their caregivers came up with stories about clinic attendance that didn't make sense. During our interviews, I assessed their psychosocial issues tapping into their home, education, activities and peers, drugs and alcohol, suicidality, emotion/behaviour, and thought disturbance (mapping the HEADSS domains). One of the heart breaking interviews I had, was with a 14 year old girl who lost both parents and was later adopted by her aunt. Since the loss of her parents, she has been transferred twice to different schools because she could not cope in a new environment. She was withdrawn, not doing well at school and has a history of alcohol use. She also had a history of suicidal thinking. The girl had multi-partner relationships and had sex with those different men without ever insisting on the use of a condom. A referral was made for her after the interview, to see a psychologist for psychotherapy.

The majority of the participants in the research attend school and most of the caregivers attest that their children were not satisfied with their performance at school. In addition, during the HEADS_ED interview tapping on education, I realized that most of the participants were struggling with their studies, either experiencing absenteeism or poor grades. This was evident when assessing their neurocognitive functioning using the KABC-2. However, there was never a dull moment when doing the assessment using the KABC-2, as I the loved the tool despite the struggle my young participants experienced during the test. Most of the participants enjoyed the Atlantis subtest where they are shown pictures of plants, shells and fishes. During the assessment, I observed that most participants displayed inability to sustain attention and were impulsively responding correctly. Some found joy in playing with the tools rather than doing task especially the rover subtest."

Case scenario from Judy Machuka

"I have had experience with psychotherapy on children and adolescents who attend routine CCC clinics. Majority of the clients who are referred through the cascade of care for psychological review experience one or a combination of the following mental conditions: depression, anxiety, traumatic stress, learning disorders, internalized HIV related stigma, substance use disorder, and conduct disorder. The clients undergo a comprehensive mental health assessment using appropriate psychometric tools, and a management plan is drawn with the client and caregiver. Referrals are made for psychiatric reviews where necessary. Some clients present with comorbid conditions, and this often adds to the HIV disease burden, thereby complicating the clients@ adherence to the treatment plan. A typical case is that of June (pseudonym), who is 17 years old. June is the 3rd born of 3 children, the other 2 siblings being 2 years and 8 years respectively, her senior. She completed primary school with a grade way below average, while one of her siblings successfully completed high school and the other attained a university degree, two years ago. She lives with her mother and 2 siblings in Nairobi. Her parents separated when she was young. She occasionally visits her father, who an alcoholic, violent, and has another family. She is not free with her mother, whom she says is unemployed, an alcoholic, and harsh, or even her siblings. However, she is free with her aunt.

June started HIV treatment in 2011. Her adherence to medication has been poor

and she has sometimes missed medication for up to 1 month. She has previously been diagnosed with dyslexia in 2013, convulsion disorder in mid-2015, traumatic stress disorder and depression at the beginning of 2016. She has a history of physical and sexual abuse, which have since left her insecure, secretive and seeking attachment. She is currently sexually active, and uses alcohol and cigarettes. She does not intend to continue with school, and instead would like to undertake a course if she gets finances. She enjoys playing football and swimming. Her management has included individual therapy particularly cognitive behavioural and trauma therapy, family and peer group psychotherapy, adherence and addiction counseling. She has shown improvement in adherence to medication, identity formation and social relations."

Evaluation

The purpose of evaluation of the adaptation of the CETA model in ongoing children and adolescent support groups at the CCC would be to look at what has been accomplished, how it was accomplished, and to learn how the intervention can be improved. The adaptation of the CETA model would be done through an open implementation trial with a total of 28 participants in differentiated support groups, 7 from ages 10-14 years, 6 from ages 15-19 years, and 15 from ages 20-24 years. This sample typifies an average number of 30 adolescents, 8 from ages 10-14 years, 6 from ages 15-19 years, and 16 from ages 20-24 years, who attend weekly peer support groups at CCC. The trial would be conducted through 8 group sessions held fortnightly on Saturdays between 9:00-10:30am over a period of 8 months. Quantitative data would be obtained through psychosocial assessments administered prior to the start and during the 7th session of the trial. Assessments tools would include: socio-demographic questionnaire, Morinsky Medication adherence Scale, Internalized Stigma Scale, Strengths and difficulties Questionnaire, Rosenberg Self Esteem Scale, WHO Quality of Life Scale, Working Alliance Inventory for participants and moderator, Clinical Outcomes in Routine Evaluation-Outcome Measure, Patient health Questionnaire (PHQ 4 for anxiety and PHQ 9 for depression). These would assess common mental health problems experienced by children and adolescents attending CCC clinics.

A participant satisfaction questionnaire would be administered during the 7th session. The change in measures, which would be observable and measurable, would indicate change in clinical and mental health outcomes. Qualitative data would be obtained from feedback interviews at the end of each session. This would help to assess the experience of participants, moderator and peer supporters, of the group sessions, and it would help to make improvements for future group sessions. Rich qualitative data could also be obtained from individual interviews and focus group discussions 6 and 12 months after the trial from participating children and adolescents, their caregivers and health care workers at the CCC. This data would provide a guide to the impact of the trial using the CETA model.

Conclusions

The basis of using CETA as a therapeutic approach initially focused on three common mental health problems namely, depression, traumatic stress, and anxiety. Adaptation of CETA as an evidence based approach that has positive mental health outcomes in children and adolescent support groups at CCC is expected to improve the quality of services offered to this population. As CETA is applicable for use by health care workers and peer supporters with diverse levels of training and experience in mental health, positive clinical and mental health outcomes are expected from its use. We consider adapting the novel CETA model in ongoing peer groups at CCC in order to improve the quality of mental health care to children and adolescents living with HIV. The context in which we do this is by empowering the available multidisciplinary health care team who have diverse levels of training and experience in addressing children and adolescent HIV related health problems. We anticipate positive clinical and mental health outcomes through improved treatment literacy, identity formation, behaviour and social relations. It is expected that this approach will eventually become a best practice in children and adolescent health care in Kenya, that would serve as a bench mark for other health facilities both nationally and internationally

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